

An Ancestral Mourning Dove from Rexroad, Kansas

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THE Rexroad formation of southwestern Kansas has several important vertebrate faunas covering the time interval near the end of the Pliocene epoch. For many years exploration of the formation has been directed by C. W. Hibbard, who has published voluminously on the mammals and other groups.

The birds of the Rexroad formation were first studied by Wetmore (1944). In addition to material which was indeterminable, he described three birds as new and referred four others to species still living in the area. The new species included a teal (*Nettion bunkeri*), quail (*Colinus hibbardi*), and rail (*Rallus prenticei*). Referred to species still living were specimens attributed to the bufflehead (*Bucephala albeola*), wild turkey (*Meleagris gallopavo*), American coot (*Fulica americana*), and mourning dove (*Zenaidura macroura*).

Later authors have added more extinct birds to the list. Tordoff (1959) described a new genus and species of condor, *Pliogyps fisheri*. Collins (1964) added an ibis, *Plegadis gracilis* Miller and Bowman (1956), previously known from Blancan deposits in Texas. Ford (1966) described an extinct burrowing owl under the name *Speotyto megalopeza*. Murray (1967) reported three new grebes, *Pliolymbus baryosteus*, *Podiceps discors*, and *Podilymbus majusculus*. Feduccia (1967) described a swallow, *Hirundo aprica*. Later (Feduccia, 1968) he added two rails, the new species *Porzana insignis* and a species originally known from the Hagerman lake beds in Idaho, *Rallus lacustris* (Brodkorb, 1958).

The only recent report of additional living species in the avifauna is that of Collins (1964), who referred rather unsatisfactory material to two South American ibises, *Mesembrinibis cayennensis* (Gmelin) and *Phimosus infuscatus* (Lichtenstein). On the other hand, the records of the living turkey and coot are now known to be erroneous and in reality represent extinct species described, respectively, as *Agriocharis progenes* and *Gallinula kansarum* (Brodkorb, 1964, 1967).

Evidence continues to accumulate that all living species of birds arose during the Pleistocene (Brodkorb, 1966; Murray, 1967). The

bird described below demonstrates that the supposed record of the mourning dove in reality represents a species allied and apparently ancestral to the modern one. Thus of the Rexroad birds originally thought to represent living species only the bufflehead and the two South American ibises still linger in that category. The current tally of the identified Rexroad avifauna now stands at 15 extinct species and dubious records of three living ones, whose further study would seem imperative.

Zenaidura prior, new species

Holotype. Left humerus, lacking distal end (Fig. 1), Univ. Kansas Mus., no. 3995. From Rexroad formation, Upper Pliocene,



Fig. 1. *Zenaidura prior*, n. sp. Holotype humerus, University of Kansas no. 3995, from Rexroad locality 3, Meade County, Kansas. Length as preserved, 27.5 mm.

at Rexroad locality 3, type locality of Rexroad local fauna, in W 1/2 of SW 1/4, section 22, Township 33 South, Range 29 West, Meade County, Kansas.

Diagnosis. Humerus similar to that of *Zenaidura macroura* (Linnaeus), but 1) area of insertion of proscapulo humeralis brevis [teres minor of Shufeldt], on anconal surface between head and

proscapulohumeralis, a large rounded knob (obsolete in *Z. macroura*); 2) scar of proscapulohumeralis [supraspinatus of Shufeldt and Howard], in distal portion of capital groove, depressed, inclined toward external edge of bone, and sharply set off from more proximal portion of capital groove; 3) proximal portion of capital groove plunging sharply toward palmar surface, and with 2 small but well-marked foramina in upper end of groove (in *Z. macroura* capital groove only weakly divided into 2 areas by scar of proscapulohumeralis; foramina obsolete); 4) base of internal tuberosity, in area of dorsalis scapulae [infraspinus of Shufeldt and Howard] much compressed (thick in *Z. macroura*); 5) tricipital fossa shallow in distal portion, where only moderately undercutting bases of internal tuberosity and median crest (in *Z. macroura* deeply excavating bases of tuberosity and crest); 6) a row of pneumatic foramina extending across upper end of tricipital fossa (foramina confined to palmar half of fossa in *Z. macroura*); 7) proximal end of humerus wide and shaft relatively thick.

Measurements. Length through ectepicondylar tubercle, 25.4 mm (24.4-26.6 in 22 *Z. macroura*); proximal width, through bicipital crest and external tuberosity, 10.4 (8.8-10.0 in *Z. macroura*); least width of shaft, 3.8 (3.3-3.8 in *Z. macroura*).

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